

REMARKSWithdrawal of Finality of Office Action

In a communication dated August 13, 2003, Primary Examiner William Tapolcai withdrew the finality of the office action dated July 18, 2003.

Claim Status

Claims 1-20 and 22-29 are pending. In the office action dated July 18, 2003, Claims 10 and 11 stand allowed whereas Claims 1-9, 12-20, and 22-29 stand rejected.

Rejection under 35 U.S.C. §103(a)

In the office action dated July 18, 2003, the Examiner rejected claims 1-4, 6-9, 12-20, and 22-29 under 35 U.S.C. §103(a) as being unpatentable over Patel (U.S. Patent No. 5,396,403) (hereafter "Patel") in view of Umezawa et al. (U.S. Patent No. 5,023,695) (hereafter "Umezawa"). The Examiner rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Patel in view of Umezawa as applied to Claims 1-4 and further in view of Lin et al. (U.S. Patent No. 6,188,578) (hereafter "Lin").

Claim 1 recites "cooling fluid to contact and move laterally across the active surface" (emphasis added). Claim 8 recites "cooling fluid is to contact and move laterally across the active region" (emphasis added). Claim 12 recites "moving a cooling fluid laterally across an active surface of the integrated circuit die" (emphasis added). Claim 17 recites "cooling fluid is to contact and move laterally across the

active surface" (emphasis added). Claim 27 recites "cooling fluid ... to contact and move laterally across the active region of the integrated circuit die" (emphasis added).

Patel in combination with Umezawa do not teach or suggest the cited portions of claims 1, 8, 12, 17, and 27. Patel recites "a plurality of integrated circuit chips 13 mounted on a first surface 15 of the substrate by means of solder bumps 17" (col. 4, lines 46-48). Patel further recites "FIG. 4 illustrates ... substrate 61 that has one or more chips 63 on an upper surface 65 and more chips 67 on a lower surface 69" (col. 6, lines 5-8).

Umezawa discloses a "cooling fluid 26" that "strikes against the bottom wall of the corresponding cut cavity 24 formed in the cooling plate 25" (col. 4, lines 53-55 and FIGs. 5 and 6) and "cooling plate 25 is opposed in gap relation to top surfaces of integrated circuits 22, and formed with a plurality of ... cavities 24 ... separated therefrom by a thin bottom wall" (emphasis added) (col. 4, lines 25-30).

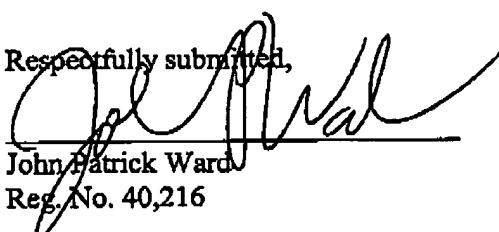
Applicants respectfully submit that claims 1, 8, 12, 17, and 27 are allowable over the teachings and suggestions of Patel in combination with Umezawa for at least the reasons provided above. Accordingly, Applicants request the Examiner to allow claims 1, 8, 12, 17, and 27. Applicants request allowance of claims 2-4 and 6-7 for at least the same reasons as pertain to claim 1. Applicants request allowance of claim 9 for at least the same reasons as pertain to claim 8. Applicants request allowance of claims 13-16 for at least the same reasons as pertain to claim 12. Applicants request allowance of claims 18-20 and 22-26 for at least the same reasons as pertain to base claim 17. Applicants request allowance of claims 28-29 for at least the same reasons as pertain to base claim 27.

Lin fails to cure the stated deficiency of Patel in combination with Umezawa as described with respect to Claim 1. For at least that reason, Claim 5 is allowable over the teachings and suggestions of Patel in combination with Umezawa and Lin.

Accordingly, Applicants request allowance of Claims 1-20 and 22-29. If the Examiner has any questions concerning this application, please call the applicants' attorney at (212) 661-5488.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

Date: October 8, 2003

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